

***Pellaea brachyptera* (T. Moore) Baker**

Sierra cliffbrake

Polypodiaceae (Common Fern Family)

Status: State Sensitive

Rank: G4G5S2

General Description: Adapted from Gamon (1991): This evergreen fern arises from a thick, woody, branched, horizontal rhizome, with brownish, needle shaped scales $\frac{1}{4}$ in. (5-8 mm) long. The clustered fronds are 6-16 in. (15.25-40.5 cm) long, with stout, purplish brown stipes that are at least as long as the blades, and naked. The petioles are about $1\frac{1}{2}$ to 8 in. (4-20 cm) long, brown or purplish-brown, and smooth. The twice-pinnate blades are dull or gray-green, $1\frac{1}{2}$ to $8\frac{1}{4}$ in. (4-21 cm) long and $\frac{1}{2}$ to $1\frac{1}{2}$ in. (1.5-4 cm) wide. The blades are composed of 5-11 linear leaflets, measuring $\frac{1}{4}$ to $\frac{2}{3}$ inch (6-17 mm long), usually close spreading, with the margins rolled backwards towards the underside and concealing the sporangia.

Identification Tips: In Washington, *Pellaea brachyptera* is quite distinctive from the other *Pellaea* species. Within its range it may be mistaken for another rare species, *P. breweri*. The petioles of *P. brachyptera* are about $1\frac{1}{2}$ to 8 in. (4-20 cm) long and brown or purplish-brown, and smooth, while the petioles of *P. breweri* that are $\frac{1}{2}$ to $3\frac{1}{2}$ in. (1.5-9 cm) long, chestnut to dark reddish-brown in color, smooth (or with a few long hairs), shining, and becoming darker and duller in age. The petioles of *P. brachyptera* do not have grooves nor break off forming persistent petiole bases. However, the petioles of *P. breweri* has old petiole-bases that are much more numerous than the green leaves.

Phenology: This species is identifiable throughout the year.

Range: Occurs in northern California to southwestern Oregon with a disjunct population in Chelan County, Washington.

Habitat: In Washington the species has been observed in open, dry, south to west facing slopes, growing in rocky soil, around the base of boulders, and in sparse coniferous stands, from 1100 to 3500 feet (335-1067 meters) elevation. Associated species at one or more sites include ponderosa pine (*Pinus ponderosa*), Douglas-fir (*Pseudotsuga menziesii*), bluebunch wheatgrass (*Pseudoregnaria spicata*), Sandberg bluegrass (*Poa secunda*), cheatgrass (*Bromus tectorum*), spring draba (*Draba verna*), Wallace's spikemoss (*Selaginella wallacei*), arrowleaf balsamroot (*Balsamorhiza sagittata*), and silky lupine (*Lupinus sericeus*).

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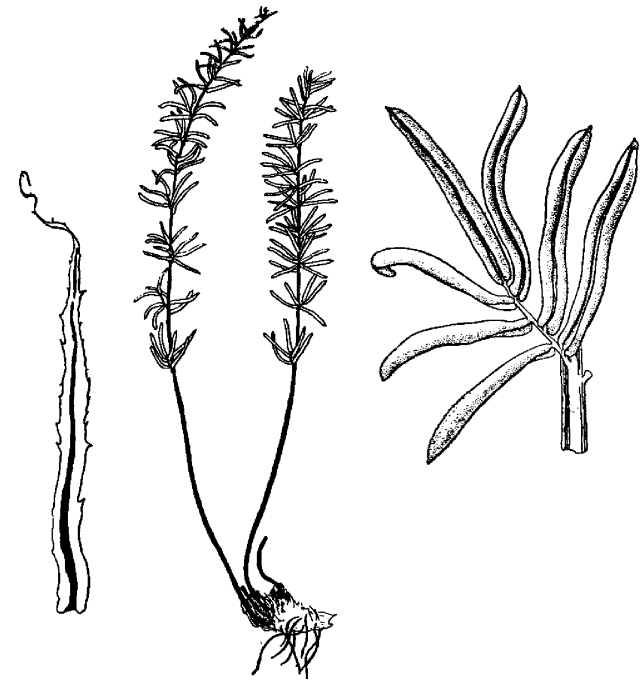
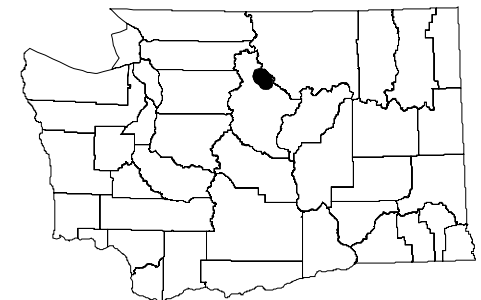


Figure from Tryon, Alice F. 1957. A revision of the fern genus *Pellaea* section *Pellaea*. *Annals of the Missouri Botanical Garden* 44:125-193. Reprinted with permission.

Known distribution
of *Pellaea brachyptera*
in Washington



Pellaea brachyptera

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Pellaea brachyptera

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Ecology: *Pellaea brachyptera* is a dryland fern that's found in sites that are relatively sparsely vegetated.

State Status Comments: *Pellaea brachyptera* is known from one small area in Washington. This, in addition to its small range in the state contributes to its state status.

Inventory Needs: Additional inventory is needed for *Pellaea brachyptera*. The Lake Chelan and the Chelan-Sawtooth Wilderness Area are the most likely areas in which additional populations might be found. Known occurrence sites should be revisited.

Threats and Management Concerns: Many decades of grazing by sheep and horses has led to habitat degradation. An abundance of weedy species has accompanied the grazing, but the impact of this abundance is not yet known. Efforts to eradicate weedy species have potentially negative effects on *Pellaea brachyptera*. Fire is known to occur in known sites, but fire would not likely carry through the rocky, sparsely vegetated sites, or burn very intensely if it did (Alverson, 1986).

Comments: Some authors have fragmented the Polypodiaceae into smaller families, placing the genus *Pellaea* within the Pteridaceae (Maidenhair fern family).

References:

Alverson, E.R. and J.A. Arnett. 1986. *Pellaea brachyptera* new to Washington. American Fern Journal 76(1): 25-26

Gamon, John. 1991. Report on the status of *Pellaea brachyptera* (T. Moore) Baker. On file with WNHP

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